

WHAT IS CLAIMED IS:

1. A handling device for electronic chip components, comprising:
an accommodating device having a plurality of cavities for putting electronic chip components thereinto; and
a feeder for supplying the electronic chip components to the accommodating device; wherein
the accommodating device can be moved and at least two of the plurality of cavities are simultaneously disposed at a location close to the feeder, and the electronic chip components are put into the cavities from the feeder by performing a suction operation in the cavities.
2. A handling device for electronic chip components as claimed in claim 1, wherein the feeder is a circulatory feeder in which the electronic chip components can be moved freely with any orientation thereof and the electronic chip components can be put into the cavities in a free order.
3. A handling device for electronic chip components as claimed in claim 1, wherein, when the electronic chip components are put into the cavities from the feeder, the electronic chip components are directly put into the cavities without being moved along a main surface of the accommodating device.
4. A handling device for electronic chip components as claimed in claim 1, wherein the accommodating device is a rotating disk-shaped device having a main surface, and the cavities are disposed so as to be located close to the feeder as a result of rotation thereof.
5. A handling device for electronic chip components as claimed in claim 4, wherein the accommodating device is disposed so that its rotation axis is in a substantially horizontal position.
6. A handling device for electronic chip components as claimed in claim 4, wherein the transport surface of the feeder has a descending inclination relative to the accommodating device and the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

7. A handling device for electronic chip components as claimed in claim 4, wherein the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

8. A handling device for electronic chip components as claimed in claim 1, wherein end portions of the electronic chip components put or waiting to be put into the cavities of the accommodating device protrude to the transport passage of the feeder.

9. A handling device for electronic chip components as claimed in claim 1, further comprising a dispersing device for dispersing the electronic chip components being transported by the feeder such a density of electronic chip components near the cavities of the accommodating device may be made a target value.

10. A handling device for electronic chip components as claimed in claim 1, wherein electrical characteristics of the electronic chip components put into the cavities are measured.

11. A handling device for electronic chip components, comprising:
an accommodating device having a plurality of cavities for putting electronic chip components therinto; and
a feeder for supplying the electronic chip components to the accommodating device; wherein
the accommodating device can be moved and at least one of the cavities is successively disposed at a location which is the closest to the feeder;
on a transport surface of the feeder, the electronic chip components are supported on only one side surface thereof, without fixing an orientation of the length direction of the electronic chip components; and
the electronic chip components are put into the cavities from the feeder by performing a suction operation in the cavities.

12. A handling device for electronic chip components as claimed in claim 11, wherein the feeder is a circulatory feeder in which the electronic chip components can be moved freely with any orientation thereof and the electronic chip components can be put into the cavities in a free order.

13. A handling device for electronic chip components as claimed in claim 11, wherein, when the electronic chip components are put into the cavities from the feeder, the electronic chip

components are directly put into the cavities without being moved along a main surface of the accommodating device.

14. A handling device for electronic chip components as claimed in claim 11, wherein the accommodating device is a rotating disk-shaped device having a main surface, and the cavities are disposed so as to be located close to the feeder as a result of rotation thereof.

15. A handling device for electronic chip components as claimed in claim 14, wherein the accommodating device is disposed so that its rotation axis is in a substantially horizontal position.

16. A handling device for electronic chip components as claimed in claim 14, wherein the transport surface of the feeder has a descending inclination relative to the accommodating device and the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

17. A handling device for electronic chip components as claimed in claim 14, wherein the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

18. A handling device for electronic chip components as claimed in claim 14, wherein end portions of the electronic chip components put or waiting to be put into the cavities of the accommodating device protrude to the transport passage of the feeder.

19. A handling device for electronic chip components as claimed in claim 11, further comprising a dispersing device for dispersing the electronic chip components being transported by the feeder such a density of electronic chip components near the cavities of the accommodating device may be made a target value.

20. A handling device for electronic chip components as claimed in claim 11, wherein electrical characteristics of the electronic chip components put into the cavities are measured.

21. A handling device for electronic chip components, comprising:
an accommodating device having a plurality of cavities for putting electronic chip components thereinto; and
a feeder for supplying the electronic chip components to the accommodating device; wherein

the accommodating device can be moved and at least one of the cavities is successively disposed at a location which is the closest to the feeder;

on a transport surface of the feeder, the electronic chip components are freely oriented in the width direction and the thickness direction thereof and are supported on only one side surface thereof, without fixing an orientation of the length direction of the electronic chip components; and

the electronic chip components are put into the cavities from the feeder by performing a suction operation in the cavities.

22. A handling device for electronic chip components as claimed in claim 21, wherein the feeder is a circulatory feeder in which the electronic chip components can be moved freely with any orientation thereof and the electronic chip components can be put into the cavities in a free order.

23. A handling device for electronic chip components as claimed in claim 21, wherein, when the electronic chip components are put into the cavities from the feeder, the electronic chip components are directly put into the cavities without being moved along a main surface of the accommodating device.

24. A handling device for electronic chip components as claimed in claim 21, wherein the accommodating device is a rotating disk-shaped device having a main surface, and the cavities are disposed so as to be located close to the feeder as a result of rotation thereof.

25. A handling device for electronic chip components as claimed in claim 24, wherein the accommodating device is disposed so that its rotation axis is in a substantially horizontal position.

26. A handling device for electronic chip components as claimed in claim 24, wherein the transport surface of the feeder has a descending inclination relative to the accommodating device and the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

27. A handling device for electronic chip components as claimed in claim 24, wherein the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

28. A handling device for electronic chip components as claimed in claim 21, wherein end portions of the electronic chip components put or waiting to be put into the cavities of the accommodating device protrude to the transport passage of the feeder.

29. A handling device for electronic chip components as claimed in claim 21, further comprising a dispersing device for dispersing the electronic chip components being transported by the feeder such a density of electronic chip components near the cavities of the accommodating device may be made a target value.

30. A handling device for electronic chip components as claimed in claim 21, wherein electrical characteristics of the electronic chip components put into the cavities are measured.

31. A handling device for electronic chip components, comprising:
an accommodating device having a plurality of cavities for putting electronic chip components thereinto; and
a feeder for supplying the electronic chip components to the accommodating device; wherein
the accommodating device can be moved and at least one of the cavities is successively disposed at a location close to the feeder, and the electronic chip components are made to float in air by a floating unit of the feeder and, by performing a suction operation in the cavities, the electronic chip components in the air are put into the cavities.

32. A handling device for electronic chip components as claimed in claim 31, wherein the feeder is a circulatory feeder in which the electronic chip components can be moved freely with any orientation thereof and the electronic chip components can be put into the cavities in a free order.

33. A handling device for electronic chip components as claimed in claim 31, wherein, when the electronic chip components are put into the cavities from the feeder, the electronic chip components are directly put into the cavities without being moved along a main surface of the accommodating device.

34. A handling device for electronic chip components as claimed in claim 31, wherein the accommodating device is a rotating disk-shaped device having a main surface, and the cavities are disposed so as to be located close to the feeder as a result of rotation thereof.

35. A handling device for electronic chip components as claimed in claim 34, wherein the accommodating device is disposed so that its rotation axis is in a substantially horizontal position.

36. A handling device for electronic chip components as claimed in claim 34, wherein the transport surface of the feeder has a descending inclination relative to the accommodating device and the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

37. A handling device for electronic chip components as claimed in claim 34, wherein the main surface of the accommodating device is inclined such that an angle between the main surface of the accommodating device and the transport surface of the feeder increases.

38. A handling device for electronic chip components as claimed in claim 31, wherein end portions of the electronic chip components put or waiting to be put into the cavities of the accommodating device protrude to the transport passage of the feeder.

39. A handling device for electronic chip components as claimed in claim 31, further comprising a dispersing device for dispersing the electronic chip components being transported by the feeder such a density of electronic chip components near the cavities of the accommodating device may be made a target value.

40. A handling device for electronic chip components as claimed in claim 31, wherein electrical characteristics of the electronic chip components put into the cavities are measured.

41. A handling device for electronic chip components comprising:
an accommodating device having a plurality of cavities for putting chip-type electronic components thereinto;
a transport portion for transporting the electronic chip components to the cavities in the accommodating device;
a suction block having a transport passage linked to the transport portion and putting the electronic chip components into the transport passage by a suction operation; and
a feeder for supplying the electronic chip components to a location near an entrance of the transport passage of the suction block; wherein
the feeder is a circulatory feeder in which the electronic chip components move freely with any orientation thereof in a free direction and the electronic chip components are supplied to the transport passage of the suction block in a free order.

42. A handling device for electronic chip components, comprising:
an accommodating device having a plurality of cavities for putting electronic chip components thereinto; and
a feeder for supplying the electronic chip components to the accommodating device; wherein
the accommodating device can be moved and at least one of the cavities is successively disposed at a location which is the closest to the feeder;
the feeder is a circulatory feeder in which the electronic chip components are move freely with any orientation thereof and the electronic chip components are supplied to the cavities in a free order; and
by performing a suction operation in the cavities, the electronic chip components are directly put into the cavities from the feeder without being moved along the main surface of the accommodating device.

43. A handling method for electronic chip components, comprising the steps of:
providing an accommodating device having a plurality of cavities; and
putting electronic chip components into the accommodating device from a feeder for supplying the electronic chip components; wherein
by performing a suction operation in at least two of the cavities simultaneously disposed at a location close to the feeder, the electronic chip components are put into the cavities from the feeder.

44. A handling method for electronic chip components, comprising the steps of:
providing an accommodating device having a plurality of cavities; and
putting electronic chip components into the accommodating device from a feeder for supplying the electronic chip components; wherein
by performing a suction operation in at least one cavity disposed at a location which is the closest to the feeder, the electronic chip components are directly put into the cavities from the feeder without being moved along the main surface of the accommodating device.